

COMMENTS OF SOUTHERN CALIFORNIA EDISON COMPANY TO THE
CALIFORNIA AIR RESOURCES BOARD ON THE PRELIMINARY DRAFT
EVALUATION OF GREEN HOUSE GAS BENEFITS FOR RENEWABLE ENERGY
TECHNOLOGIES

MICHAEL D. MONTOYA
CATHY A. KARLSTAD
NANCY CHUNG ALLRED

Attorneys for
SOUTHERN CALIFORNIA EDISON COMPANY

2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California 91770
Telephone: (626) 302-3102
Facsimile: (626) 302-3990
E-mail: nancy.allred@sce.com

Dated: **March 9, 2010**

I.

INTRODUCTION

Southern California Edison Company (“SCE”) thanks the California Air Resources Board (“CARB”) for giving stakeholders the opportunity to review and comment on the Preliminary Draft Evaluation of Green House Gas Benefits for Renewable Energy Technologies (“Draft Evaluation”) released by CARB at its February 2, 2010 workshop. SCE appreciates the time and effort from CARB staff in preparing the Draft Evaluation and in holding its February 2, 2010 workshop.

II.

CARB SHOULD REEVALUATE THE GREENHOUSE GAS BENEFIT DETERMINATION FOR RENEWABLE RESOURCES

In the Draft Evaluation, CARB staff proposes to calculate greenhouse gas (“GHG”) benefits for certain renewable energy technologies based on the actual GHG emissions of the renewable energy technology netted against the GHG emissions associated with the displacement of fossil fuel generation. Accurately calculating these avoided GHG emissions from fossil generation sources requires several points of data. CARB must not only identify which fossil generation sources were displaced by the renewable resources, but also accurately categorize the technology used to operate the system that would have otherwise been dispatched, such as simple or combined-cycle technologies. However, the manner in which the California Independent System Operator (“CAISO”) dispatches units makes it impossible to know exactly which units are not dispatched due to purchased renewable energy. CARB’s evaluation assumes that renewable energy always displaces incremental or marginal energy typically provided by natural gas power plants, and were it not for the Renewables Portfolio Standard (“RPS”), the state would meet its incremental energy needs only with non-renewable, gas-fired resources. Because there is a range of GHG emissions profiles and efficiencies within the natural gas

powerplant mix in California, from a GHG standpoint it is not always true that the least efficient GHG resource will be the first displaced.

The Draft Evaluation assigns the GHG emissions from the displaced incremental power a measurement of 1,100 pounds CO₂ equivalent (“CO₂e”) per MWh. This number is the emissions performance standard (“EPS”) for new power plants adopted by the California Public Utilities Commission in Decision 07-01-039. However, this metric was “intended to serve as a near-term bridge until an enforceable GHG emissions limit applicable to load serving entities is established,”¹ and not as an estimate of calculated GHG benefits. If CARB intends to accurately measure the true GHG benefits of renewable energy technology, it should reconsider using the EPS as an estimate as this number may not correctly reflect the emissions profile of the type of generation that renewable energy will displace.

As the Draft Evaluation accurately acknowledges, GHG emissions from the electricity system will decline over time as inefficient older units are retired or repowered, and as California uses fewer and fewer out-of-state coal resources.² The 1,100 lbs CO₂e per MWh estimate may have been a reasonable reflection of marginal emissions in the past, but the renewable energy produced today could be potentially displacing energy that is actually cleaner than 1,100 lbs CO₂e per MWh, and CARB should consider and evaluate this possibility. If CARB wants to provide a more accurate estimate, it should conduct a careful evaluation based on an effective production simulation model. Otherwise, CARB risks inaccurately assigning benefits to renewable energy that are either overstated or should have been attributed to modernization of the electricity fleet.

In addition, CARB should create an open and consistent methodology for calculating both the avoided emissions number as well as the GHG Benefit Determination. The methodology for measuring these avoided emissions must remain consistent as California’s energy mix changes. Inconsistent application of this value over time will result in variable Renewable Energy Standard (“RES”) targets and create significant uncertainty as to the success

¹ D.07-01-039 at 2.

² See Draft Evaluation at 2.

of these targets. Clarifying the emissions factor, whether or not it remains 1,100 lbs CO₂e per MWh, will help ensure that any future changes to the basis and calculation of this number will be recognized and understood by load-serving entities and incorporated into their regulatory planning.

III.

CARB SHOULD CLARIFY HOW BACKUP POWER WILL BE USED IN THE GHG BENEFIT DETERMINATION

As the Draft Evaluation notes, wind and solar energy resources are intermittent sources that need occasional backup power from fossil-fueled power.³ In the Draft Evaluation, CARB staff did not include the backup power for these intermittent sources in calculating the GHG benefits from wind and solar resources. Instead, CARB staff notes that CAISO operational studies and other analyses are in progress regarding the nature of emissions from the backup power, and that based on these studies CARB staff may later include these emissions in determining the GHG benefits. These emissions should be considered, as excluding the GHG impact of standby power needed to integrate renewable resources will create inaccurate determinations of the GHG benefit of these resources.

CARB should clarify its use of the term “backup power.” The Draft Evaluation currently does not explain whether its definition might be broad enough to include fossil-fueled generation needed to run concurrently with a renewable resource to provide ancillary services such as frequency regulation and voltage support.⁴ Further, CARB staff should maintain consistency in its definition when calculating the GHG benefit and when determining compliance. For example, CARB should not define “backup power” in such a way that wind power is assigned a high GHG benefit because it does not account for the backup power for ancillary services, but then define “backup power” more narrowly when determining compliance with RES regulations.

³ Draft Evaluation at 3.

⁴ Additional clarity is also necessary regarding CARB’s assumption that each MWh of renewable energy offsets on MWh of fossil-fueled power.

SCE looks forward to reviewing the results of the forthcoming studies referenced by CARB and working with CARB staff to identify appropriate methods to calculate the net MWh savings associated with renewable resources.⁵

IV.

CONCLUSION

SCE appreciates the opportunity to comment on the Draft Evaluation and to work with CARB on developing a Draft RES Regulation that meets the needs of the State and stakeholders.

Respectfully submitted,

MICHAEL D. MONTOYA
CATHY A. KARLSTAD
NANCY CHUNG ALLRED

/s/ Nancy Chung Allred

By: Nancy Chung Allred

Attorneys for
SOUTHERN CALIFORNIA EDISON COMPANY

2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California 91770
Telephone: (626) 302-3102
Facsimile: (626) 302-3990
E-mail: nancy.allred@sce.com

March 9, 2010

⁵ CARB should also be cautious about its technology evaluations and how those are translated into the RES, as statements regarding preferred technologies may affect the market for the wide array of renewable resources available to Californians.